

# CONCEPT PRELIMINARY STUDY

## PERIMETER FENCE REPLACEMENT AT THE U.S. NATIONAL ARBORETUM



Prepared For:  
Commission of Fine Arts  
National Capitol Planning Commission  
State Historic Preservation Office

Prepared By:  
STV Incorporated  
205 West Welsh Drive, Douglassville, PA 19518

STV PROJECT NUMBER 30-19702  
**Revised April 11, 2019**



# CONCEPT PRELIMINARY STUDY

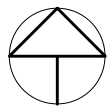
## PERIMETER FENCE REPLACEMENT AT THE U.S. NATIONAL ARBORETUM

The U.S. Department of Agriculture (USDA) selected STV to design the replacement of approximately 2.4 miles of the existing perimeter fencing and gates. The existing fencing and gates are in various states of disrepair and are not consistent in appearance and design due to various sections being installed at later dates from the original fencing installed in the 1960s. Portion of the existing fence, mainly along New York Avenue are located outside USNA property and it is the intent to relocate those sections of fencing onto USNA property. Also, USNA is experiencing deer entering the Property and destroying specimen plantings throughout the year, and fawns being trapped between the pickets. The project proposes to install new fencing that maintains a consistent height of 8'-0" and picket spacing set to a maximum of 4" on center. Studies have indicated that fencing of 8 feet have reduced deer infestation as much as 90%. Due to the nature of the operation of the Arboretum, better perimeter controls are warranted to help maintain the specimen plantings within the property. Therefore, the intent of this project is to provide a consistent look for the perimeter fence, install new gates at the entrances, and provide better perimeter controls to prevent deer from entering the facility.

The U.S. National Arboretum (USNA) established in 1927 by an act of Congress, is located in northeast Washington D.C., and consists of an approximate area of 451 acres. The USNA along with being a living museum and park, is also a U.S. Department of Agriculture (USDA) Agricultural Research Service (ARS) research and education facility.

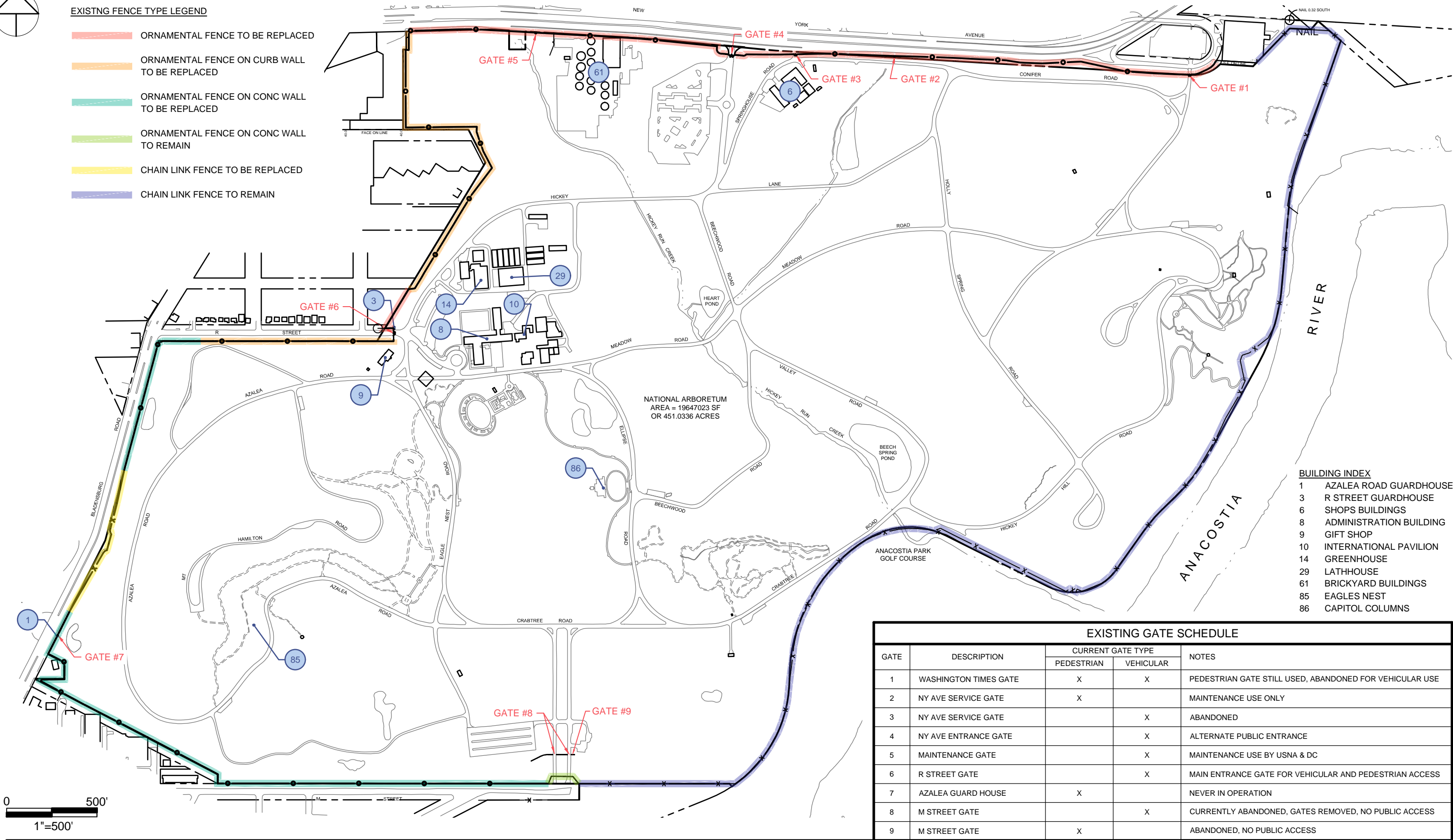
The limits of the USNA property is bound by New York Avenue NE (Route 50) to the north, Anacostia River to the east, Langston Golf Course to the southeast and south, M Street NE and private properties to the south, Bladensburg Road NE to the west and R Street NE and private properties to the northwest. Refer to Figure 1 for the Visitor's Map below.





EXISTING FENCE TYPE LEGEND

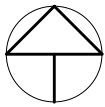
- ORNAMENTAL FENCE TO BE REPLACED
- ORNAMENTAL FENCE ON CURB WALL TO BE REPLACED
- ORNAMENTAL FENCE ON CONC WALL TO BE REPLACED
- ORNAMENTAL FENCE ON CONC WALL TO REMAIN
- CHAIN LINK FENCE TO BE REPLACED
- CHAIN LINK FENCE TO REMAIN



- BUILDING INDEX**
- 1 AZALEA ROAD GUARDHOUSE
  - 3 R STREET GUARDHOUSE
  - 6 SHOPS BUILDINGS
  - 8 ADMINISTRATION BUILDING
  - 9 GIFT SHOP
  - 10 INTERNATIONAL PAVILION
  - 14 GREENHOUSE
  - 29 LATHHOUSE
  - 61 BRICKYARD BUILDINGS
  - 85 EAGLES NEST
  - 86 CAPITOL COLUMNS

EXISTING GATE SCHEDULE				
GATE	DESCRIPTION	CURRENT GATE TYPE		NOTES
		PEDESTRIAN	VEHICULAR	
1	WASHINGTON TIMES GATE	X	X	PEDESTRIAN GATE STILL USED, ABANDONED FOR VEHICULAR USE
2	NY AVE SERVICE GATE	X		MAINTENANCE USE ONLY
3	NY AVE SERVICE GATE		X	ABANDONED
4	NY AVE ENTRANCE GATE		X	ALTERNATE PUBLIC ENTRANCE
5	MAINTENANCE GATE		X	MAINTENANCE USE BY USNA & DC
6	R STREET GATE		X	MAIN ENTRANCE GATE FOR VEHICULAR AND PEDESTRIAN ACCESS
7	AZALEA GUARD HOUSE	X		NEVER IN OPERATION
8	M STREET GATE		X	CURRENTLY ABANDONED, GATES REMOVED, NO PUBLIC ACCESS
9	M STREET GATE	X		ABANDONED, NO PUBLIC ACCESS



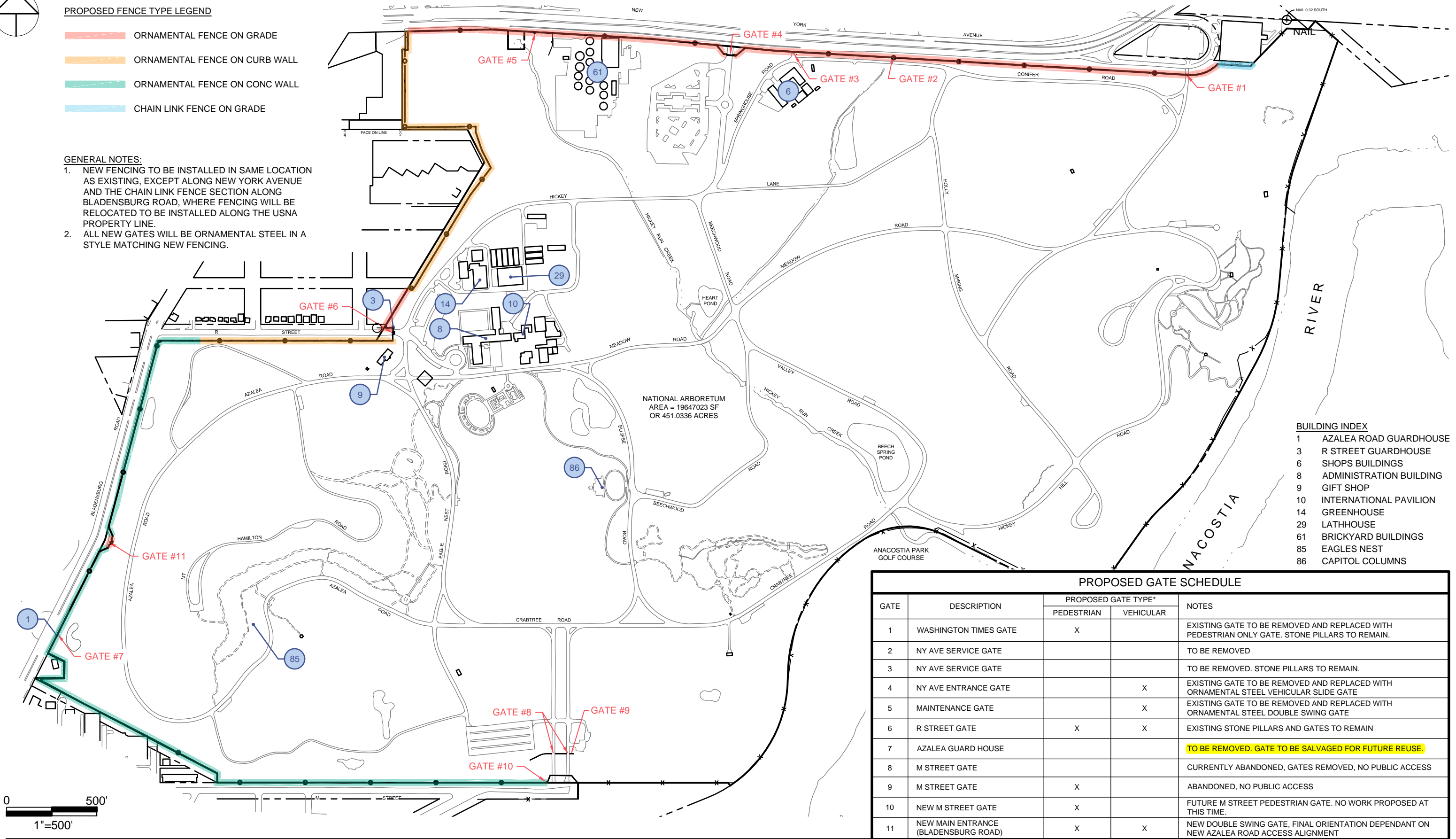


PROPOSED FENCE TYPE LEGEND

- ORNAMENTAL FENCE ON GRADE
- ORNAMENTAL FENCE ON CURB WALL
- ORNAMENTAL FENCE ON CONC WALL
- CHAIN LINK FENCE ON GRADE

GENERAL NOTES:

- 1. NEW FENCING TO BE INSTALLED IN SAME LOCATION AS EXISTING, EXCEPT ALONG NEW YORK AVENUE AND THE CHAIN LINK FENCE SECTION ALONG BLADENSBURG ROAD, WHERE FENCING WILL BE RELOCATED TO BE INSTALLED ALONG THE USNA PROPERTY LINE.
- 2. ALL NEW GATES WILL BE ORNAMENTAL STEEL IN A STYLE MATCHING NEW FENCING.



BUILDING INDEX

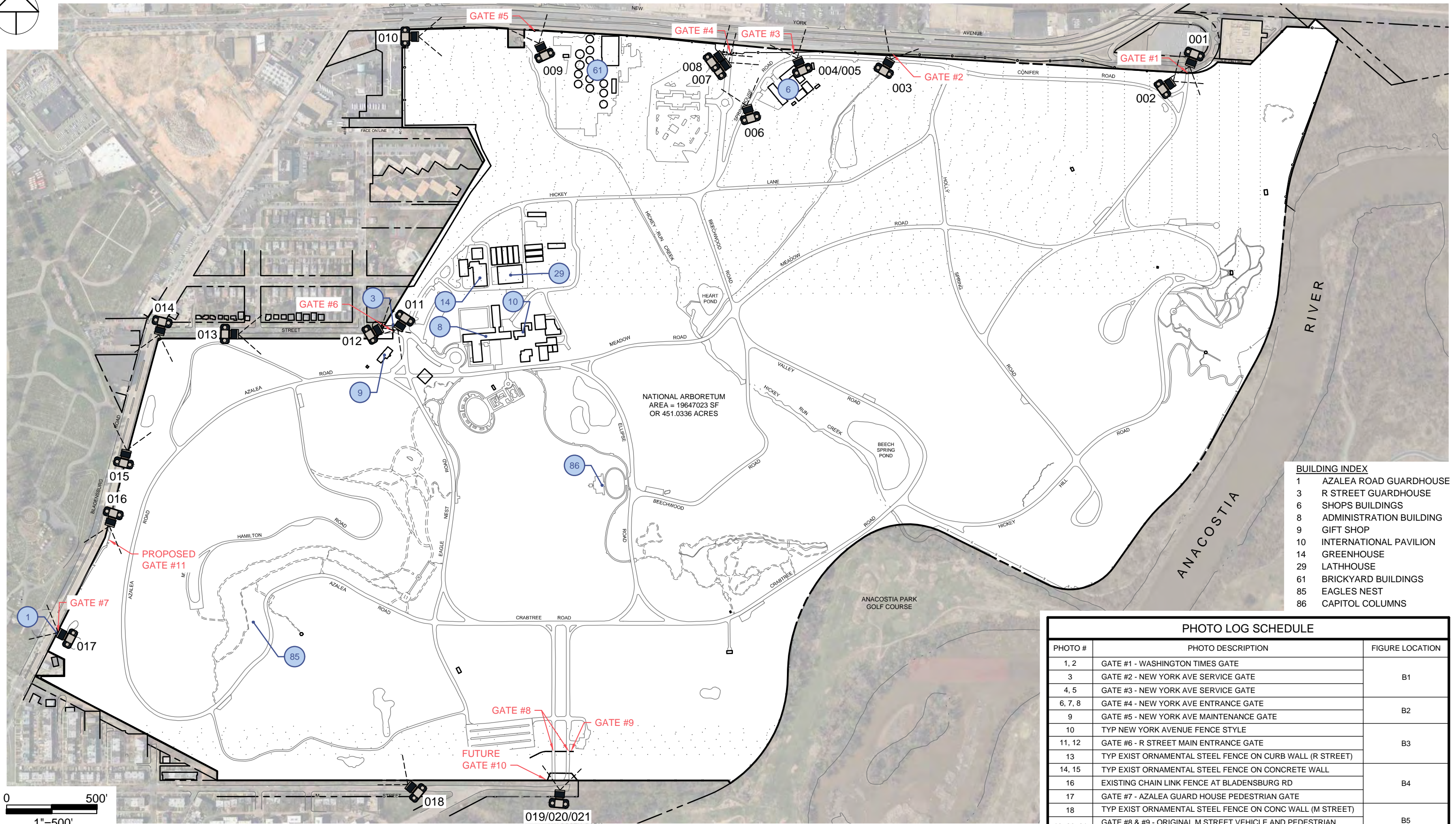
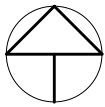
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PROPOSED GATE SCHEDULE

GATE	DESCRIPTION	PROPOSED GATE TYPE*		NOTES
		PEDESTRIAN	VEHICULAR	
1	WASHINGTON TIMES GATE	X		EXISTING GATE TO BE REMOVED AND REPLACED WITH PEDESTRIAN ONLY GATE. STONE PILLARS TO REMAIN.
2	NY AVE SERVICE GATE			TO BE REMOVED
3	NY AVE SERVICE GATE			TO BE REMOVED. STONE PILLARS TO REMAIN.
4	NY AVE ENTRANCE GATE		X	EXISTING GATE TO BE REMOVED AND REPLACED WITH ORNAMENTAL STEEL VEHICULAR SLIDE GATE
5	MAINTENANCE GATE		X	EXISTING GATE TO BE REMOVED AND REPLACED WITH ORNAMENTAL STEEL DOUBLE SWING GATE
6	R STREET GATE	X	X	EXISTING STONE PILLARS AND GATES TO REMAIN
7	AZALEA GUARD HOUSE			TO BE REMOVED. GATE TO BE SALVAGED FOR FUTURE REUSE.
8	M STREET GATE			CURRENTLY ABANDONED, GATES REMOVED, NO PUBLIC ACCESS
9	M STREET GATE	X		ABANDONED, NO PUBLIC ACCESS
10	NEW M STREET GATE	X		FUTURE M STREET PEDESTRIAN GATE. NO WORK PROPOSED AT THIS TIME.
11	NEW MAIN ENTRANCE (BLADENSBURG ROAD)	X	X	NEW DOUBLE SWING GATE, FINAL ORIENTATION DEPENDANT ON NEW AZALEA ROAD ACCESS ALIGNMENT

0 500'  
1"=500'





BUILDING INDEX	
1	AZALEA ROAD GUARDHOUSE
3	R STREET GUARDHOUSE
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85	EAGLES NEST
86	CAPITOL COLUMNS

PHOTO LOG SCHEDULE		
PHOTO #	PHOTO DESCRIPTION	FIGURE LOCATION
1, 2	GATE #1 - WASHINGTON TIMES GATE	B1
3	GATE #2 - NEW YORK AVE SERVICE GATE	
4, 5	GATE #3 - NEW YORK AVE SERVICE GATE	
6, 7, 8	GATE #4 - NEW YORK AVE ENTRANCE GATE	B2
9	GATE #5 - NEW YORK AVE MAINTENANCE GATE	
10	TYP NEW YORK AVENUE FENCE STYLE	B3
11, 12	GATE #6 - R STREET MAIN ENTRANCE GATE	
13	TYP EXIST ORNAMENTAL STEEL FENCE ON CURB WALL (R STREET)	
14, 15	TYP EXIST ORNAMENTAL STEEL FENCE ON CONCRETE WALL	B4
16	EXISTING CHAIN LINK FENCE AT BLADENSBURG RD	
17	GATE #7 - AZALEA GUARD HOUSE PEDESTRIAN GATE	
18	TYP EXIST ORNAMENTAL STEEL FENCE ON CONC WALL (M STREET)	B5
19, 20, 21	GATE #8 & #9 - ORIGINAL M STREET VEHICLE AND PEDESTRIAN GATE	



**GATE #1 - WASHINGTON TIMES GATE  
(DESIGNED 1960)**

EXISTING GATE TO BE REMOVED AND STONE PILLARS TO REMAIN.  
REPLACE WITH SELF CLOSING PEDESTRIAN GATE. EXISTING GATE IS  
LOCATED OUTSIDE USNA PROPERTY.



PHOTO 1 - STREET VIEW.



PHOTO 2 - NORTH VIEW

**GATE #2 - NEW YORK AVE SERVICE GATE  
(DESIGNED 1990)**

EXISTING PEDESTRIAN SERVICE GATE TO BE REMOVED.



PHOTO 3 - NORTH VIEW

**GATE #3 - NEW YORK AVE SERVICE GATE  
(DESIGNED 1967)**

EXISTING GATE TO BE REMOVED. STONE PILLARS TO REMAIN. GATE  
LOCATED INSIDE USNA PROPERTY



PHOTO 4 - NORTH VIEW



PHOTO 5 - VIEW OF STONE PILLAR CONSTRUCTION



**GATE #4 - NEW YORK AVENUE ENTRANCE GATE**  
**(DESIGNED 1990)**

EXISTING GATE TO BE REMOVED AND REPLACED IN A STYLE TO MATCH NEW ORNAMENTAL FENCE. STONE COLUMNS TO REMAIN.



PHOTO 6 - NORTH VIEW



PHOTO 7 - TYPICAL VIEW OF COLUMNS AND VEHICLE GATE



PHOTO 8 - TYPICAL VIEW OF COLUMNS

**GATE #5 - NEW YORK AVE MAINTENANCE GATE**  
**(DESIGNED 1990)**

EXISTING GATE TO BE REMOVED AND REPLACED IN STYLE MATCHING NEW ORNAMENTAL FENCE DESIGN.



PHOTO 9 - NORTH VIEW



**TYPICAL NEW YORK AVENUE FENCE STYLE  
(DESIGNED 1990)**

EXISTING FENCE TO BE REMOVED AND REPLACED WITH NEW ORNAMENTAL STEEL FENCE.



PHOTO 10 - TYPICAL FENCE VIEW

**GATE #6 - R STREET MAIN ENTRANCE GATE  
(DESIGNED 1967)**

EXISTING GATES, STONE COLUMNS, AND WALLS TO REMAIN.



PHOTO 11 - TYPICAL VIEW OF GATE AND STONE COLUMNS

**TYPICAL EXISTING ORNAMENTAL STEEL FENCE ON  
CURB WALL (DESIGNED 1967)**

EXISTING FENCE TO BE REMOVED AND REPLACED WITH NEW ORNAMENTAL STEEL FENCE. EXISTING WALL TO BE CLEANED AND REPAIRED AS NECESSARY.



PHOTO 13 - TYPICAL FENCE VIEW (R STREET SECTION)



PHOTO 12 - VIEW OF PEDESTRIAN GATE TO BE REOPENED



**TYPICAL EXISTING ORNAMENTAL STEEL FENCE ON CONCRETE WALL (DESIGNED 1982)**  
EXISTING FENCE TO BE REMOVED AND REPLACED WITH NEW ORNAMENTAL STEEL FENCE. EXISTING WALL TO BE CLEANED AND REPAIRED AS NECESSARY.



PHOTO 14 - SOUTH VIEW ALONG BLANDENSBURG ROAD

**EXISTING CHAIN LINK FENCE AT BLADENSBURG ROAD (DESIGNED 2000)**  
EXISTING CHAIN LINK FENCE TO BE REMOVED AND REPLACED WITH NEW ORNAMENTAL STEEL FENCE ON KNEE WALL. NEW MAIN ENTRANCE, GATE #9, TO BE INSTALLED IN STYLE MATCHING NEW ORNAMENTAL FENCE STYLE.



PHOTO 16 - VIEW OF PROPOSED LOCATION OF NEW MAIN ENTRANCE GATE #7

**GATE #7 - AZALEA GUARD HOUSE PEDESTRIAN GATE (DESIGNED 1960)**  
EXISTING USED GUARDHOUSE AND GATE TO BE REMOVED. NEW ORNAMENTAL STEEL FENCE TO BE INSTALLED IN ITS PLACE.



PHOTO 17 - VIEW OF PEDESTRIAN GATE



PHOTO 15 - NORTH VIEW ALONG BLANDENSBURG ROAD



**TYPICAL EXISTING ORNAMENTAL STEEL FENCE ON CONCRETE WALL (DESIGNED 1967)**

EXISTING FENCE TO BE REMOVED AND REPLACED WITH NEW ORNAMENTAL STEEL FENCE. EXISTING WALL TO BE CLEANED AND REPAIRED AS NECESSARY.



PHOTO 18 - VIEW ALONG M STREET

**GATE #8 - ORIGINAL M STREET ENTRANCE (DESIGNED 1960)**

ENTRANCE IS ABANDONED, VEHICLE GATES REMOVED (TIME UNKNOWN) AND NO WORK IS PROPOSED AT THIS TIME.



PHOTO 19 - VIEW OF ORIGINAL ENTRANCE AT M STREET GATE

**GATE #9 - ORIGINAL M STREET PEDESTRIAN GATE (DESIGNED 1960)**

ENTRANCE IS ABANDONED, CURRENTLY UNDER DISCUSSION TO INSTALL A NEW GATE (SEE FIGURE A2).



PHOTO 21 - VIEW OF PEDESTRIAN ACCESS GATE



PHOTO 20 - VIEW OF ORIGINAL ENTRANCE AT M STREET



PHOTO 22 - VIEW OF EXISTING FENCE ON CONCRETE WALL AT END OF ORIGINAL M STREET ENTRANCE





**REPLACEMENT ORNAMENTAL STEEL FENCE EXAMPLE**

HEIGHT: MAX 8 FT ABOVE GRADE,  
PICKET SPACING: MAX 4" CC  
RAIL NUMBER: 3  
COLOR: BLACK  
POST TREATMENT: SQUARE CAP  
GATE STYLE TO MATCH FENCE



**BLACK VINYL COATED CHAIN LINK FENCE EXAMPLE**

HEIGHT: MAX 8 FT ABOVE GRADE,  
COLOR: BLACK





**ORNAMENTAL STEEL PERSONNEL GATE EXAMPLE**

HEIGHT: MAX 8 FT ABOVE GRADE,  
PICKET SPACING: MAX 4" CC  
RAIL NUMBER: 3  
COLOR: BLACK  
POST TREATMENT: SQUARE CAP  
GATE STYLE TO MATCH FENCE



**ORNAMENTAL STEEL SLIDE GATE EXAMPLE**

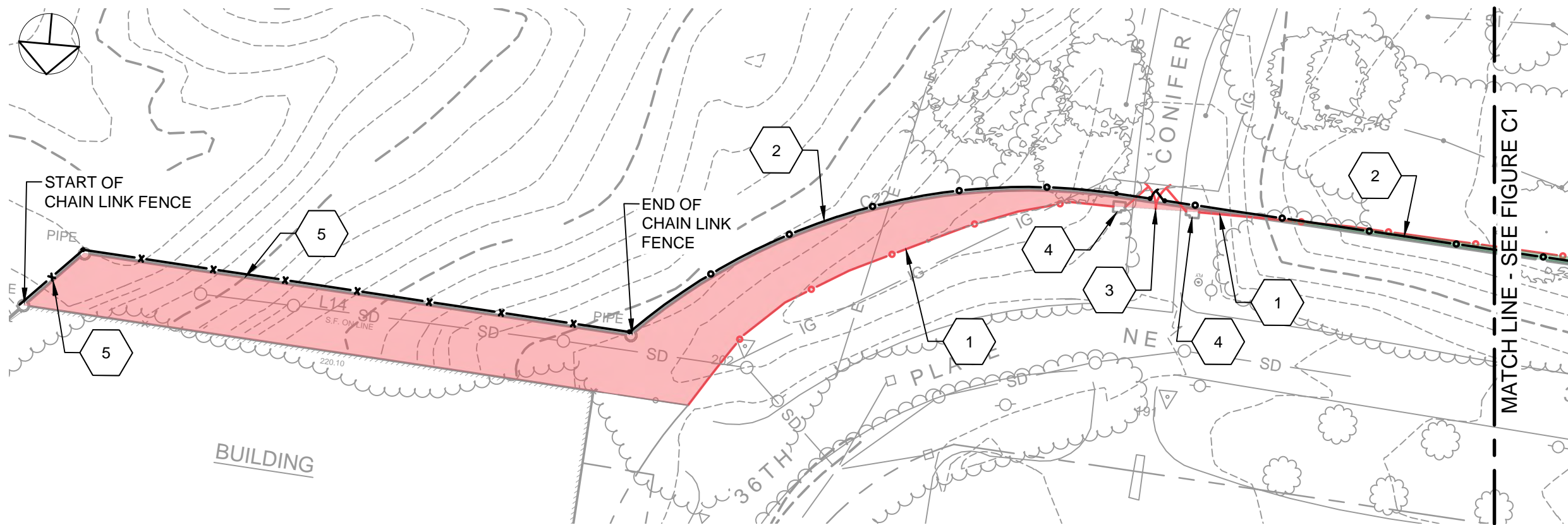
HEIGHT: MAX 8 FT ABOVE GRADE,  
PICKET SPACING: MAX 4" CC  
COLOR: BLACK  
POST TREATMENT: SQUARE CAP  
GATE STYLE TO MATCH FENCE



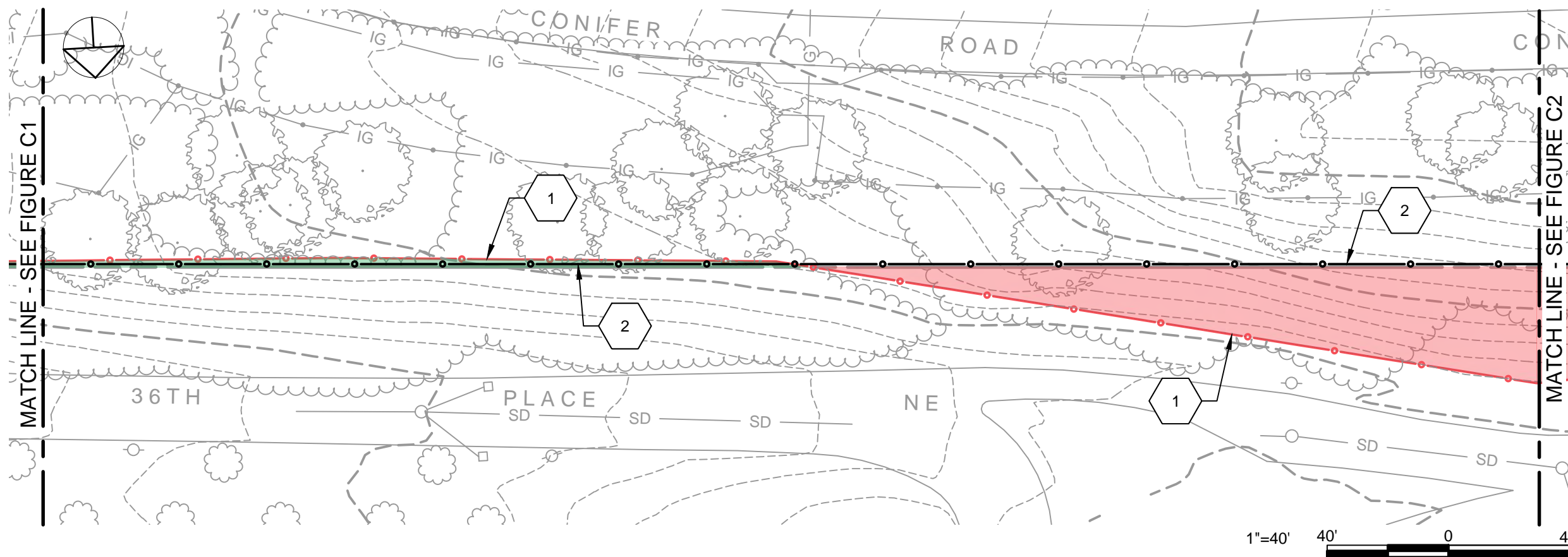
**ORNAMENTAL STEEL DOUBLE GATE EXAMPLE**

HEIGHT: MAX 8 FT ABOVE GRADE,  
PICKET SPACING: MAX 4" CC  
COLOR: BLACK  
POST TREATMENT: SQUARE CAP  
GATE STYLE TO MATCH FENCE



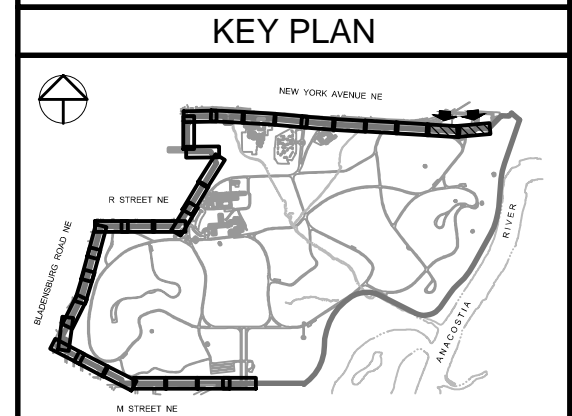


- ### KEYNOTES
1. EXISTING ORNAMENTAL STEEL FENCE TO BE REMOVED.
  2. NEW ORNAMENTAL STEEL FENCE TO BE INSTALLED A MINIMUM 1 FT INSIDE THE PROPERTY LINE.
  3. EXISTING DOUBLE SWING GATE TO BE REMOVED AND REPLACED WITH ORNAMENTAL STEEL PEDESTRIAN SWING GATE.
  4. EXISTING STONE PILLARS TO REMAIN.
  5. NEW CHAIN LINK FENCE TO BE INSTALLED A MINIMUM 1 FT INSIDE THE PROPERTY LINE.



### FENCE AREA LEGEND

<span style="display:inline-block; width:20px; height:10px; background-color:lightcoral; border:1px solid black;"></span>	FENCED AREA OUTSIDE
<span style="display:inline-block; width:20px; height:10px; background-color:lightgreen; border:1px solid black;"></span>	FENCED AREA INSIDE



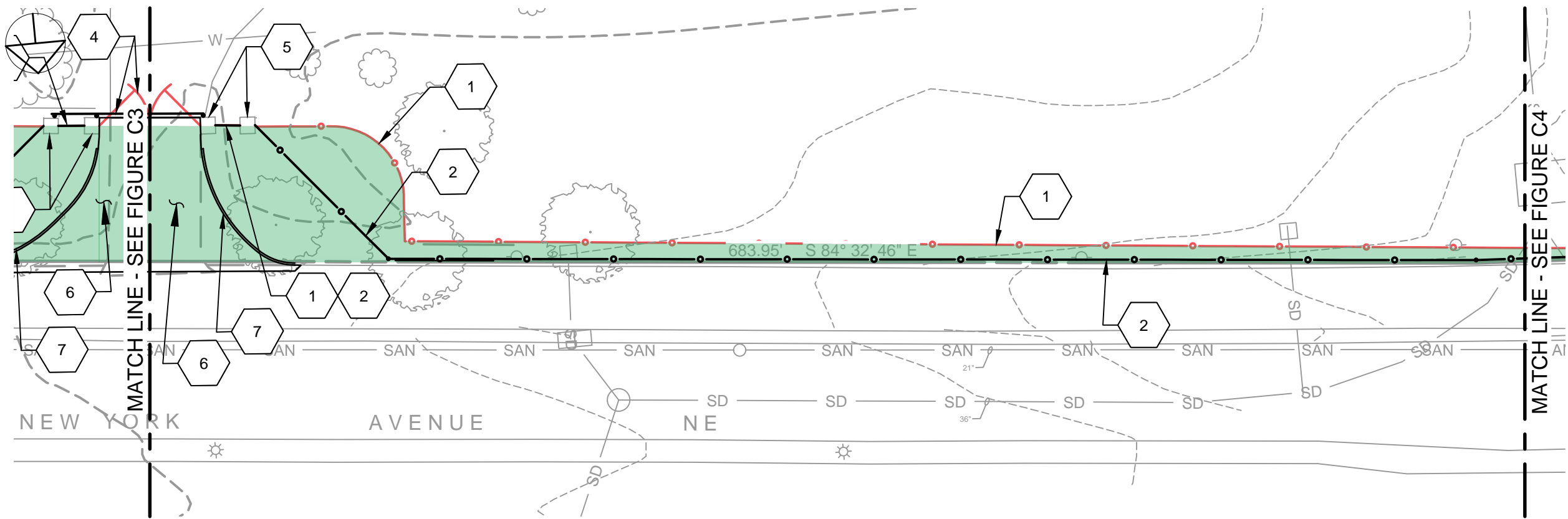




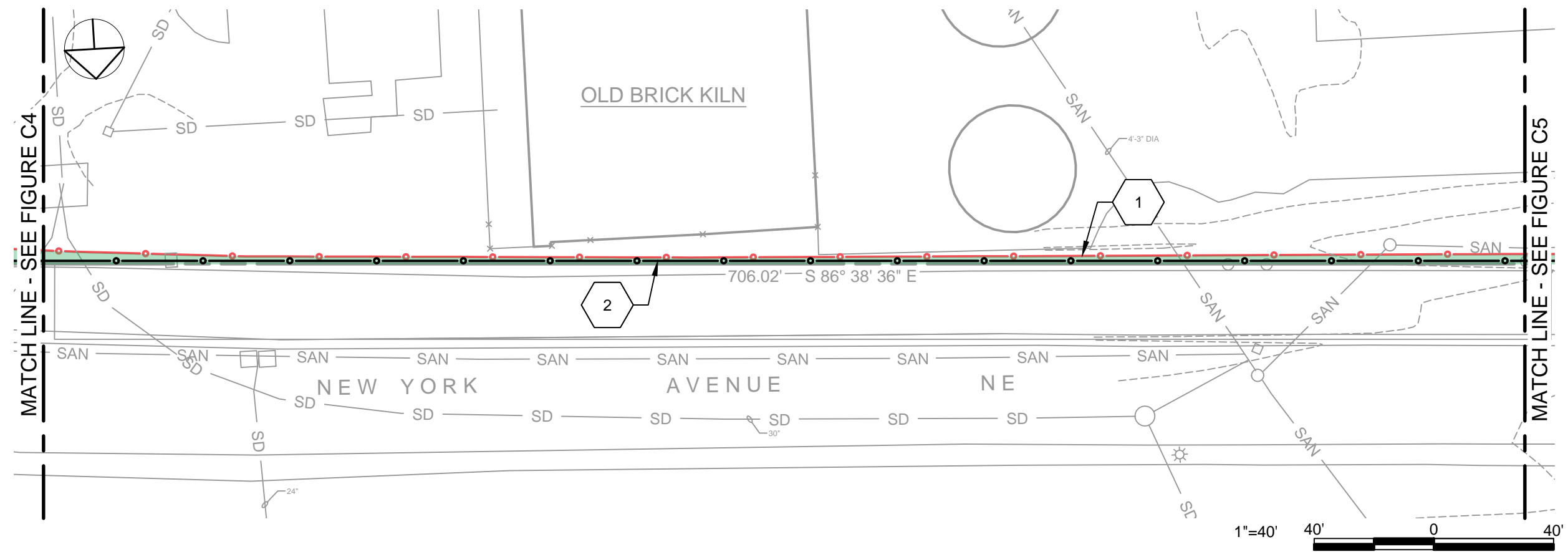








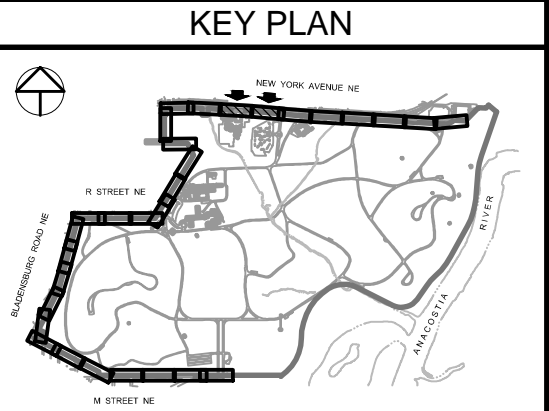
- ### KEYNOTES
1. EXISTING ORNAMENTAL STEEL FENCE TO BE REMOVED.
  2. NEW ORNAMENTAL STEEL FENCE TO BE INSTALLED A MINIMUM 1 FT INSIDE THE PROPERTY LINE.
  3. EXISTING PEDESTRIAN MAINTENANCE GATE TO BE REMOVED.
  4. EXISTING DOUBLE SWING GATE TO BE REMOVED AND REPLACED WITH ORNAMENTAL STEEL SLIDE GATE.
  5. EXISTING STONE PILLARS TO REMAIN.
  6. REMOVE EXISTING BRICK PAVERS AND REPLACE WITH NEW BITUMINOUS PAVING FOR WIDENED NEW YORK AVENUE ENTRANCE.
  7. NEW CONCRETE CURB.



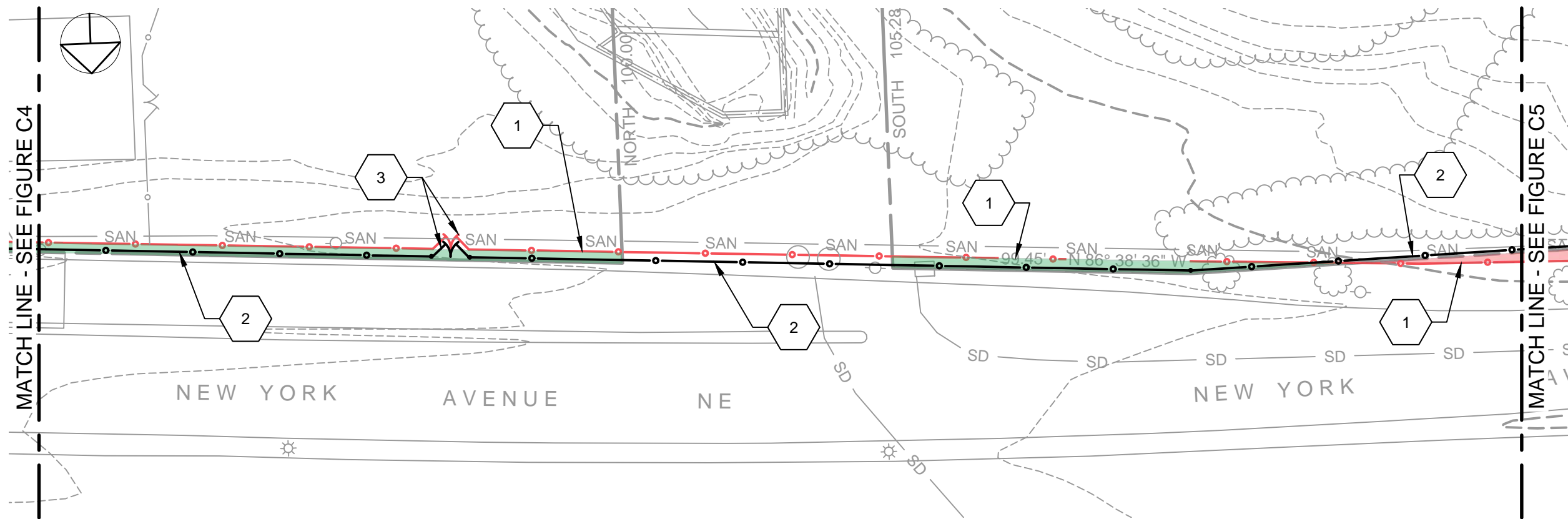
### FENCE AREA LEGEND

FENCED AREA OUTSIDE

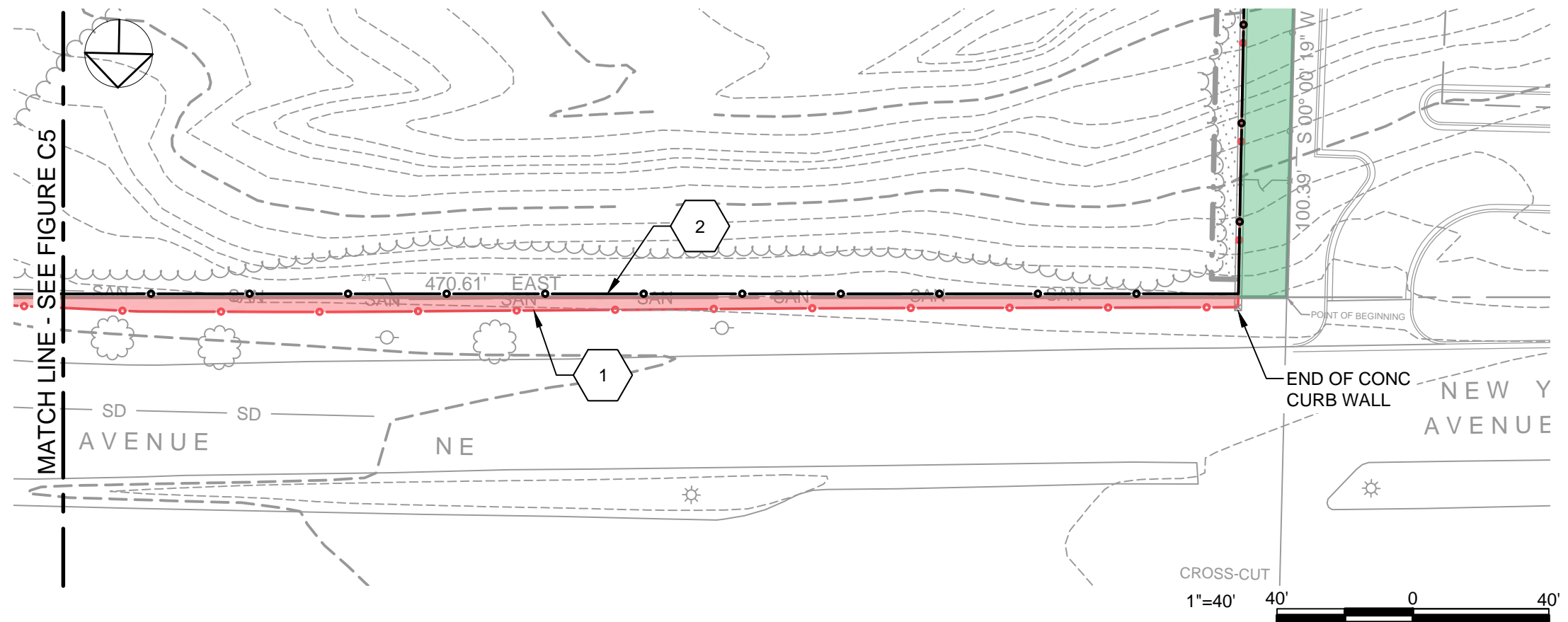
FENCED AREA INSIDE







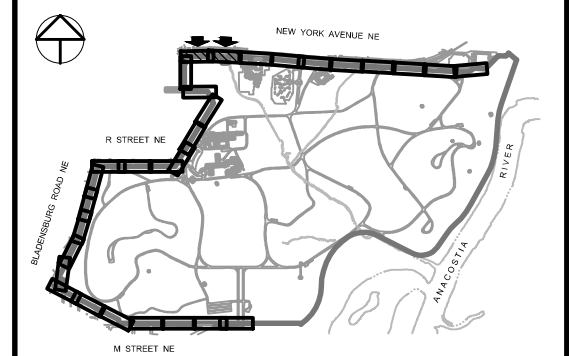
- ### KEYNOTES
1. EXISTING ORNAMENTAL STEEL FENCE TO BE REMOVED.
  2. NEW ORNAMENTAL STEEL FENCE TO BE INSTALLED A MINIMUM 1 FT INSIDE THE PROPERTY LINE.
  3. EXISTING DOUBLE SWING GATE TO BE REMOVED AND REPLACED WITH ORNAMENTAL STEEL SWING GATE



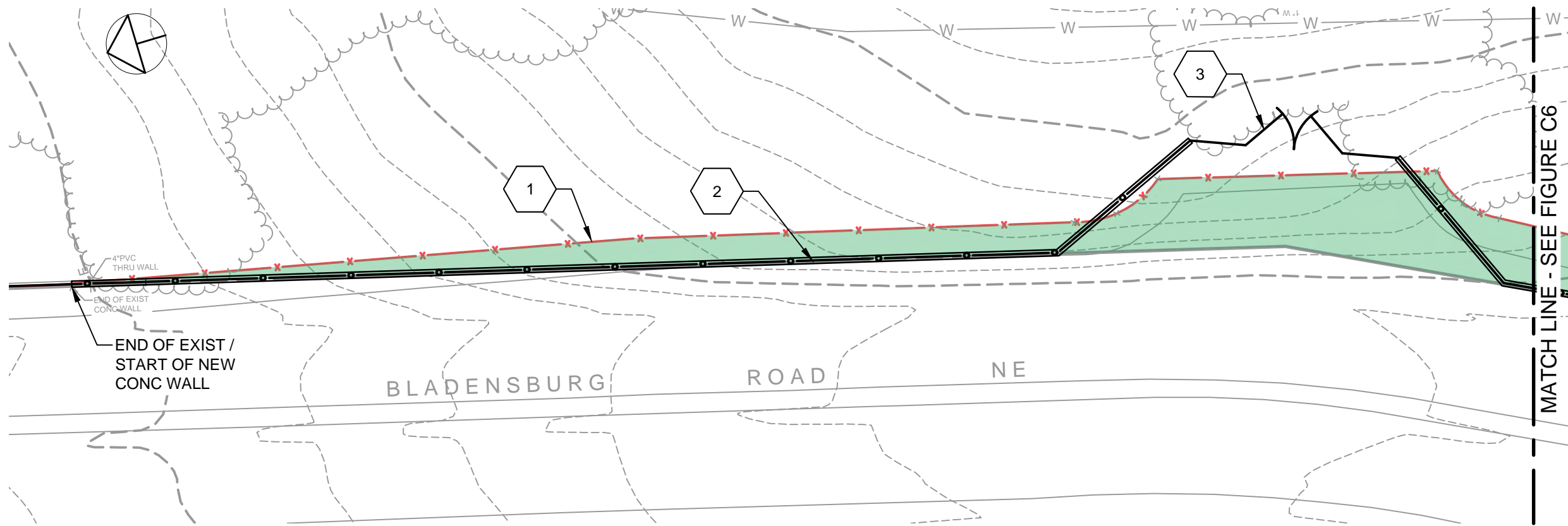
### FENCE AREA LEGEND

- FENCED AREA OUTSIDE
- FENCED AREA INSIDE

### KEY PLAN

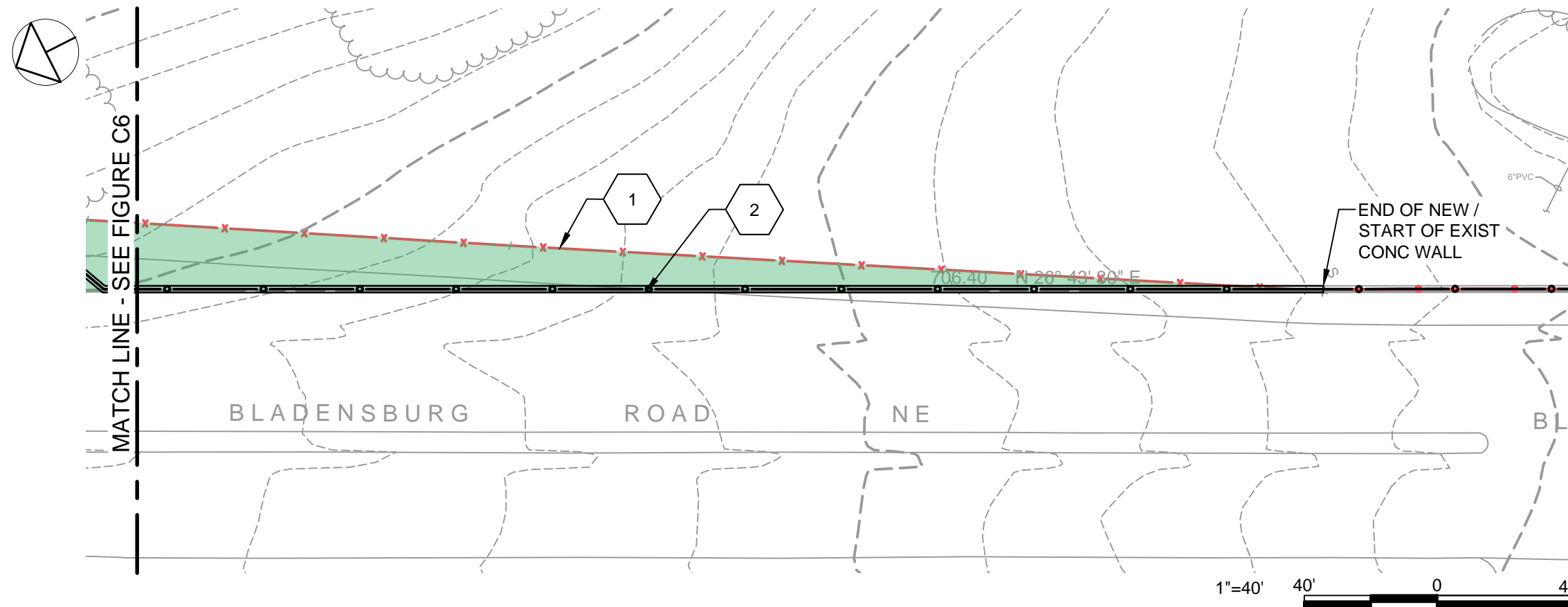






## KEYNOTES

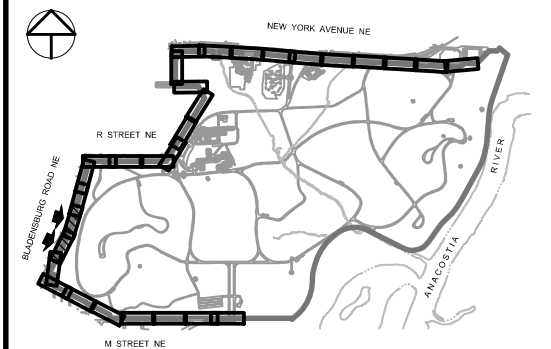
1. EXISTING TEMPORARY CHAIN LINK FENCE TO BE REMOVED.
2. NEW ORNAMENTAL STEEL FENCE ON CONCRETE KNEE WALL TO BE INSTALLED ALONG THE USNA PROPERTY LINE.
3. DOUBLE ORNAMENTAL STEEL SWING GATE TO BE INSTALLED. FINAL GATE LOCATION TO BE DETERMINED BY NEW AZALEA ROAD MAIN ENTRANCE LAYOUT.



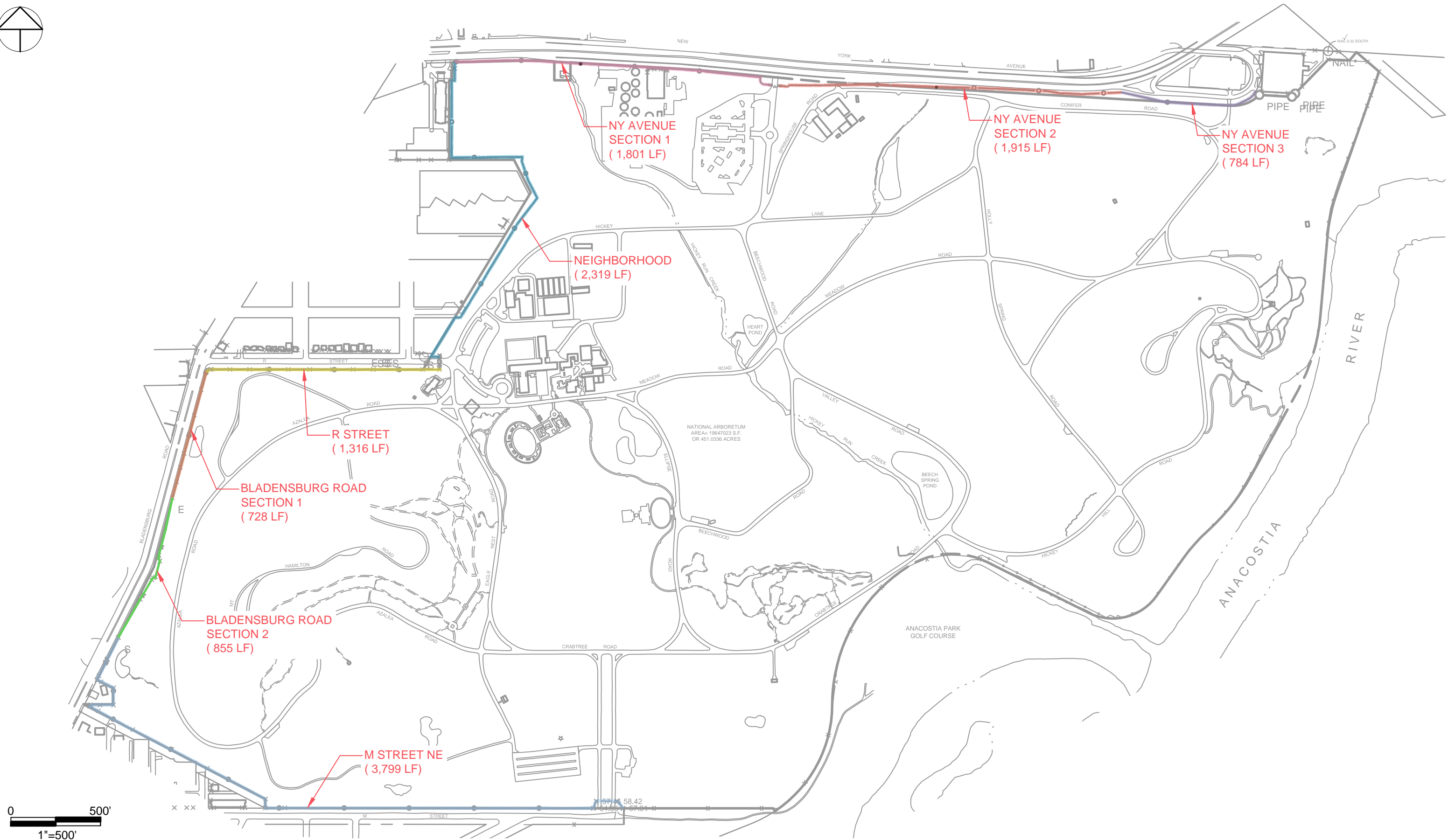
## FENCE AREA LEGEND

- FENCED AREA OUTSIDE
- FENCED AREA INSIDE

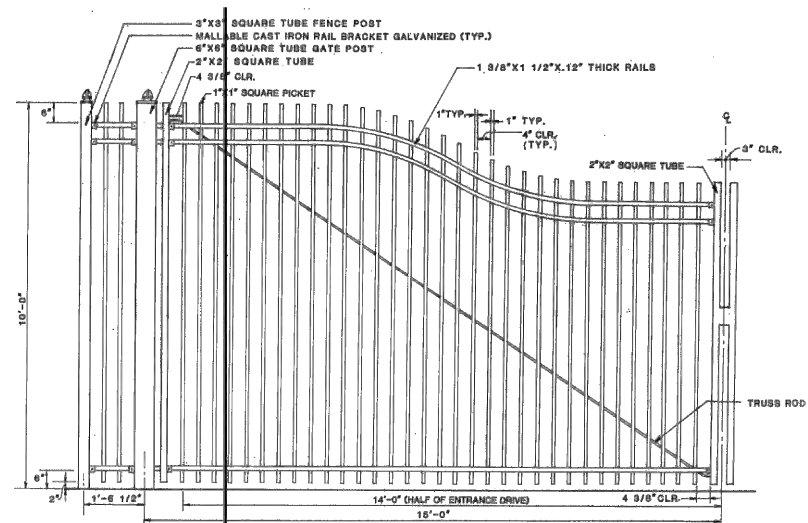
## KEY PLAN





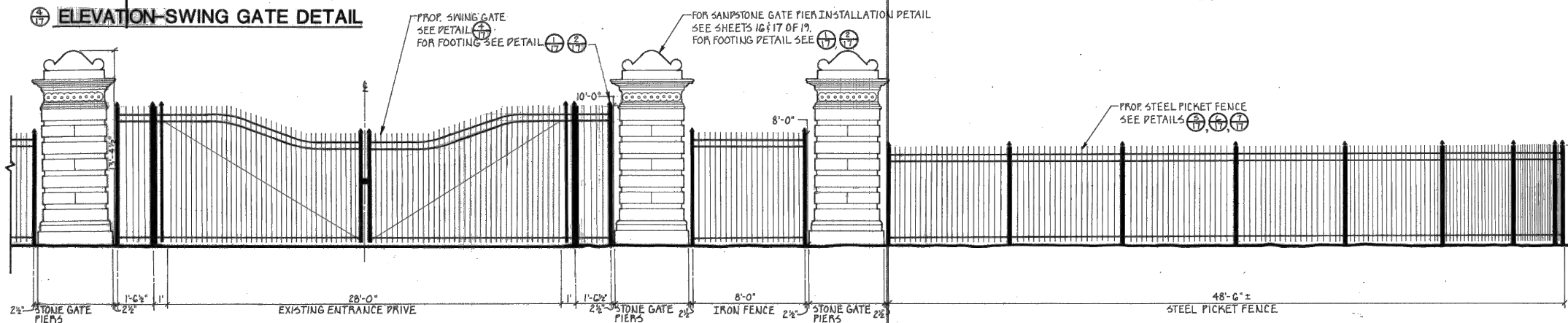






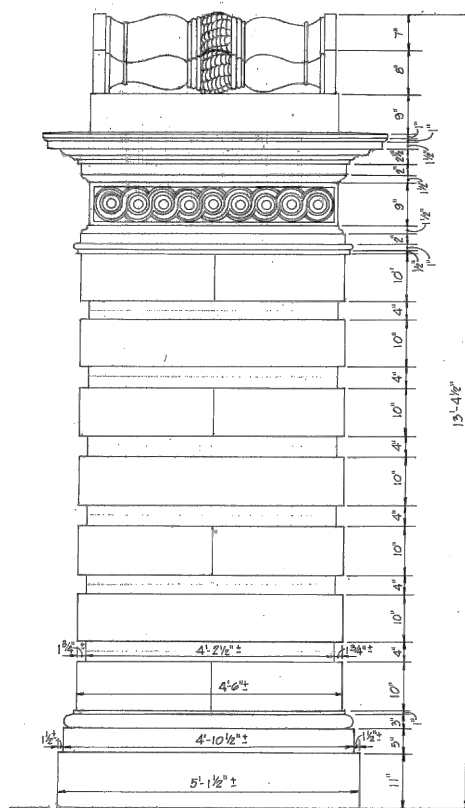
NOTES:  
 1. THE CONTRACTOR SHALL SUBMIT SHOP DRAWINGS SHOWING ADDITIONAL GATE INSTALLATION DETAILS INCLUDING GATE FRAME HINGES, GATE HINGE PIN, GATE POST HINGES, PROPOSED DROP BAR AND BRACKET, PULCRUM LATCHES, AND HOLD BACKS.  
 2. THE SUBMITTAL SHALL INCLUDE SUCH INFORMATION AS BUT NOT LIMIT TO MATERIAL, SIZE, QUALITY, FINISH, FASTENER, ETC.

#### ELEVATION-SWING GATE DETAIL

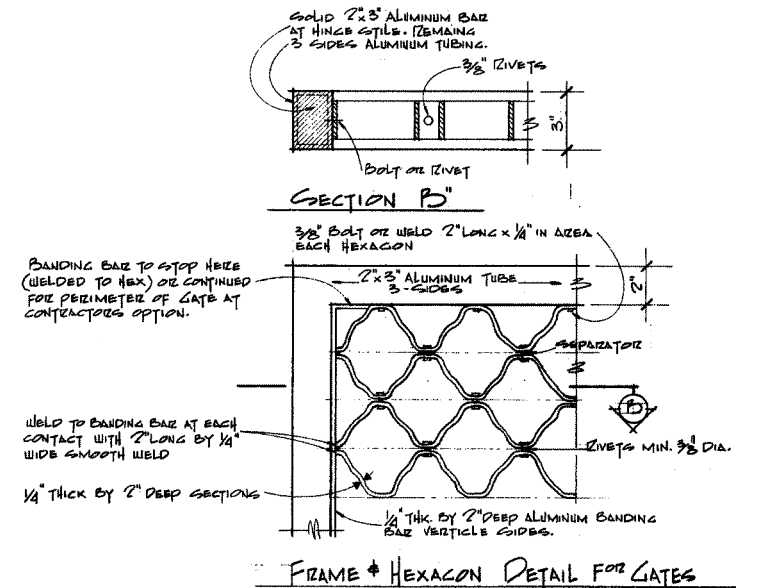


NY AVENUE PUBLIC GATE (DESIGNED 1990)

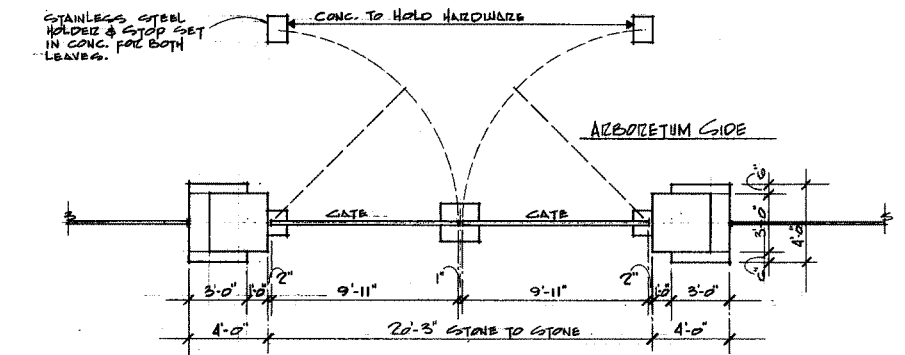
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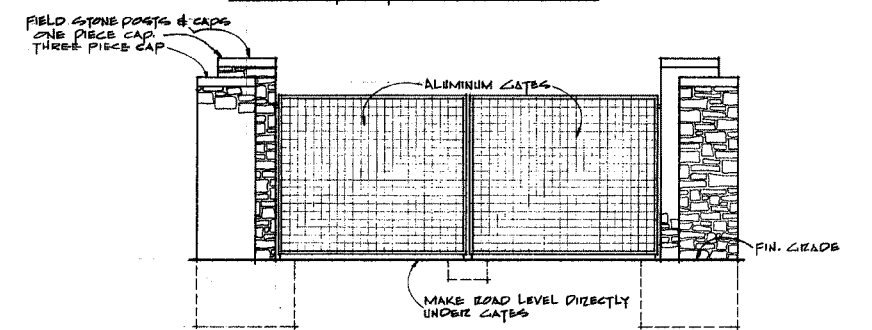
Side Elevation



FRAME & HEXAGON DETAIL FOR GATES



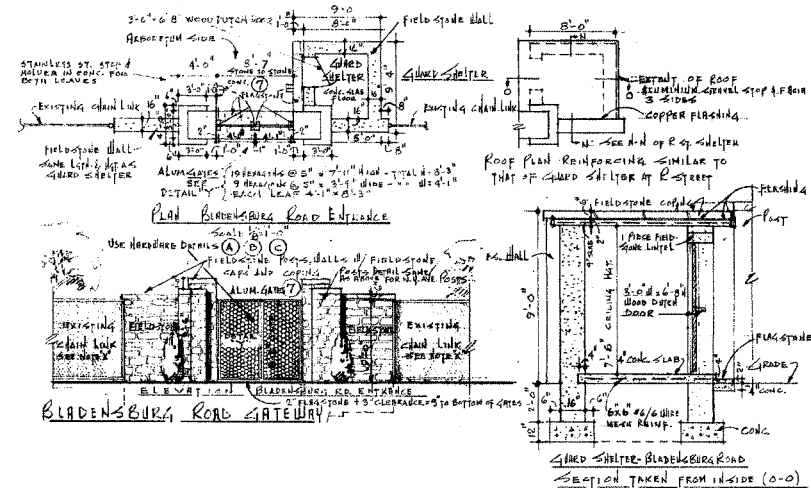
PLAN OF GATES SCALE 1/4"=1'-0"



NY AVENUE GATE (DESIGNED 1967)

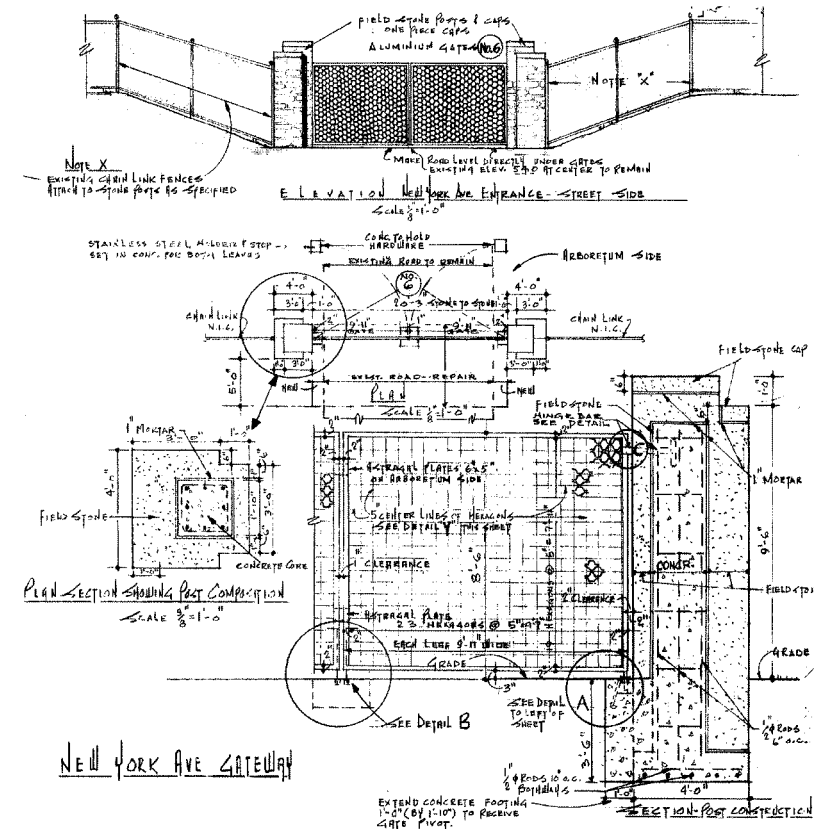
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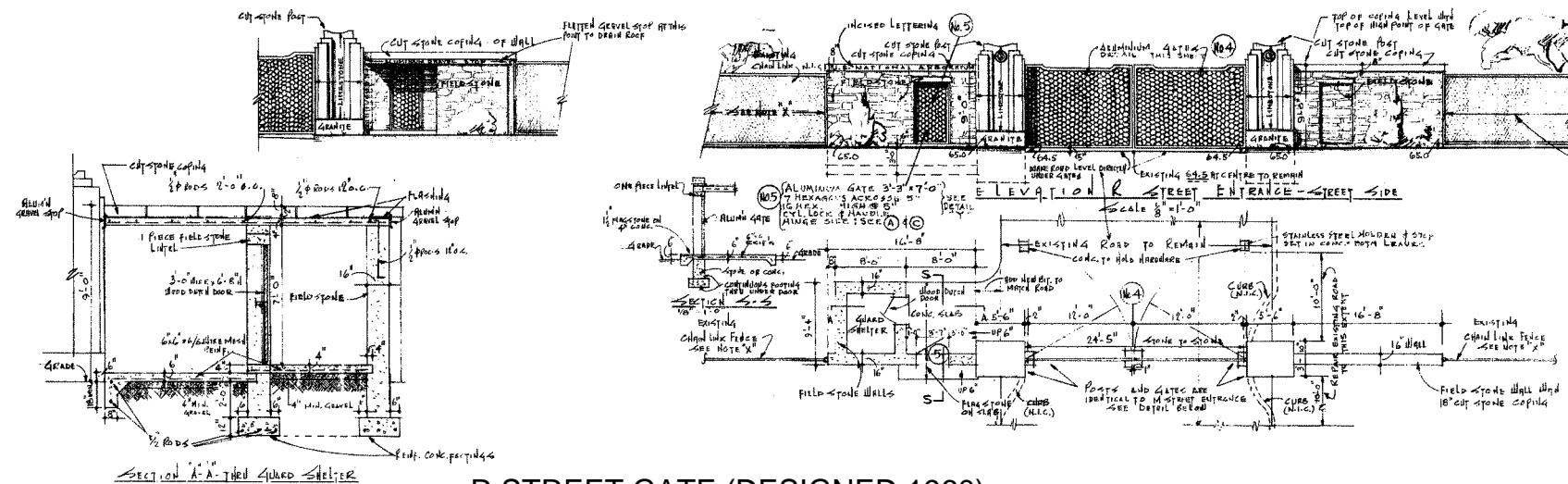
BLADENSBURG GATE (DESIGNED 1960)

NOT TO SCALE



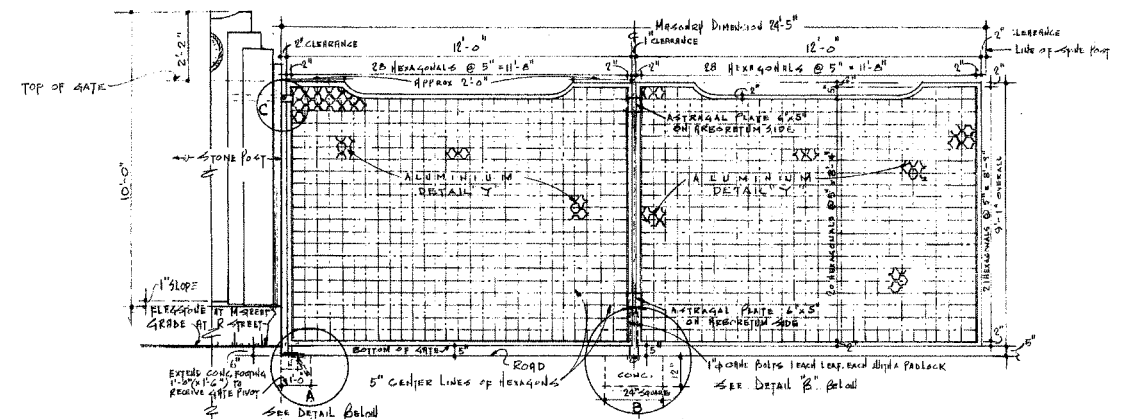
WASHINGTON TIMES GATE (DESIGNED 1960)

NOT TO SCALE



R STREET GATE (DESIGNED 1960)

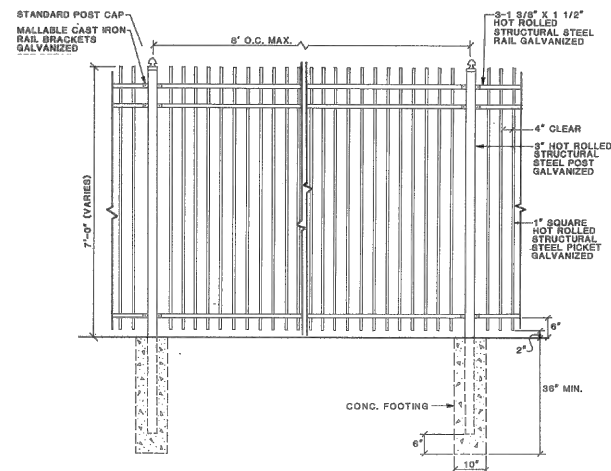
NOT TO SCALE



M AND R STREET GATE (DESIGNED 1960)

NOT TO SCALE

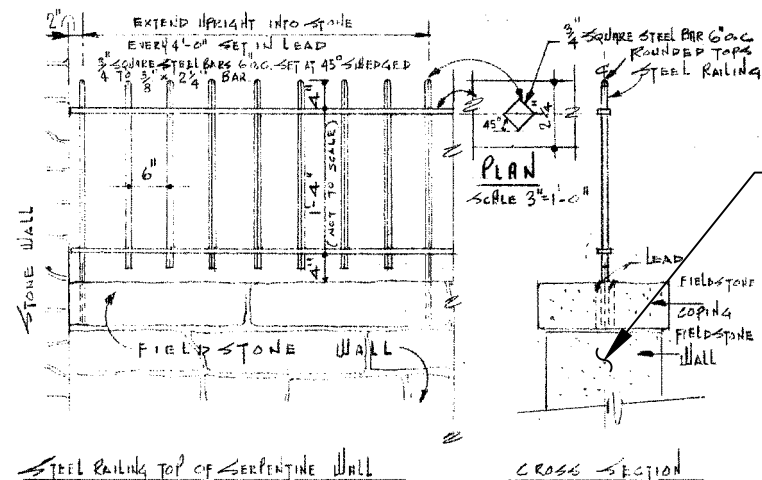




⑪ ELEVATION-STEEL FENCE

NY AVENUE ENTRANCE (DESIGNED 1990)

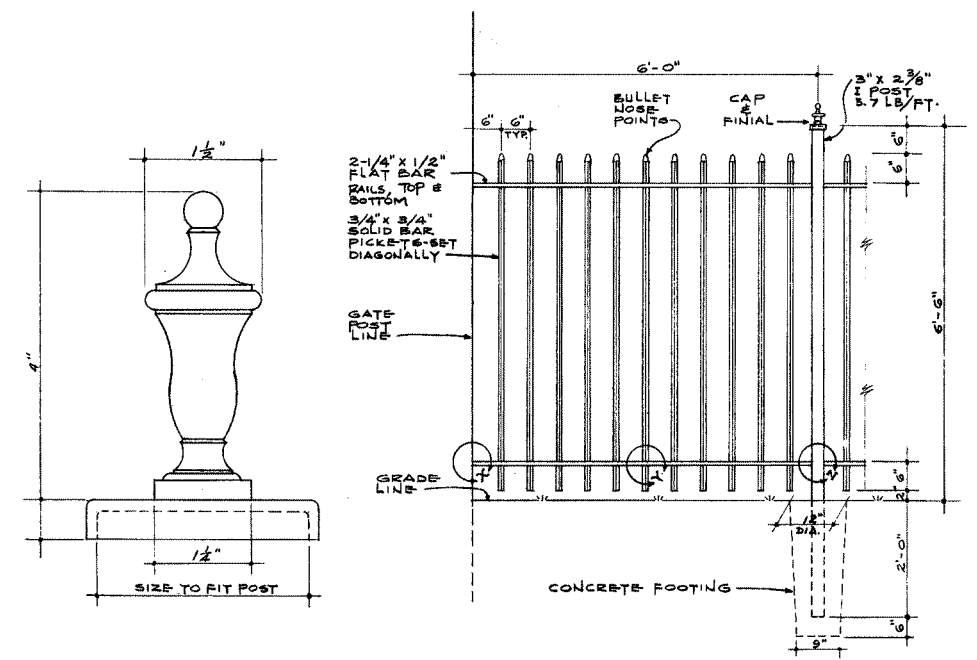
NOT TO SCALE



FIELD STONE WALL  
NOT INSTALLED PER  
ORIGINAL DESIGN

GATEWAYS AT R STREET, NY AVENUE,  
& BLADENSBURG RD (DESIGNED 1960)

NOT TO SCALE

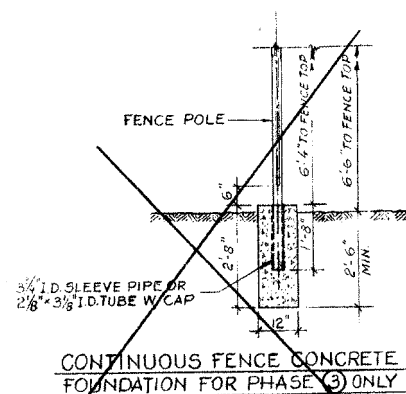


CAP & FINIAL

IN LIEU OF FINIAL SHOWN ABOVE, A STOCK MODERN  
PATTERN OF EQUAL SIZE WILL BE SELECTED.

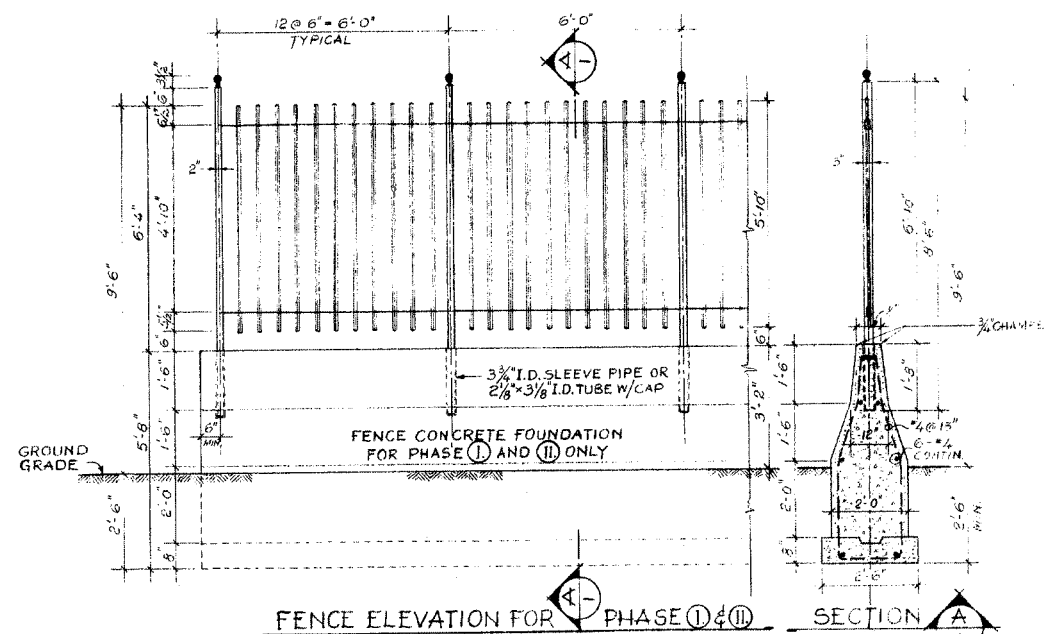
FENCING ON NEW YORK AVENUE (DESIGNED 1967)

NOT TO SCALE



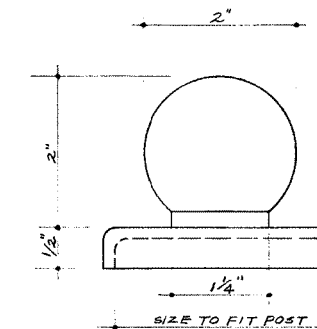
R STREET (DESIGNED 1982)

NOT TO SCALE

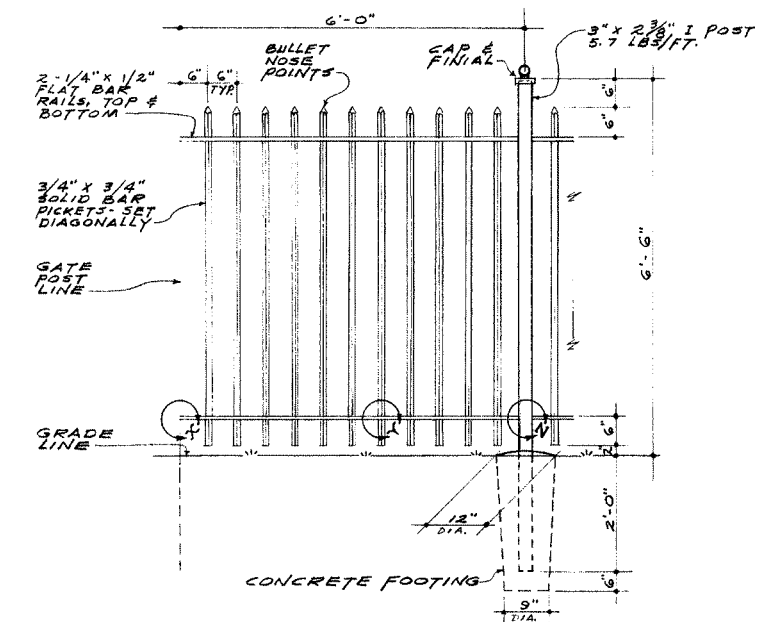


FENCING ON BLADENSBURG AND M ST (DESIGNED 1982)

NOT TO SCALE



CAP & FINIAL



ELEVATION

FENCING (DESIGNED 1976)

NOT TO SCALE





# MEMO

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**TO:** Shamarukh N. Billah, Project Manager, STV Incorporated

**FROM:** Carrie Albee, Senior Principal Investigator, Gray & Pape

**CC:** Brandon McCuin, Principal in Charge, Gray & Pape

**DATE:** March 28, 2019

**RE:** Management Summary of research undertaken in support of perimeter fence replacement United States National Arboretum, Washington, D.C.

Consistent with our contract with STV executed on October 29, 2018, Gray & Pape has undertaken historical research and on-site investigation to determine the history of the existing perimeter fences at the United States National Arboretum (USNA) in support of the proposed replacement project. This Management Summary presents the results of that research in support of the review of the project by the National Capital Planning Commission (NCPC), U.S. Commission of Fine Arts (CFA), and the District of Columbia Historic Preservation Office (DCHPO).

## On-Site Investigation

According to the boundary survey conducted by STV in 2018, the USNA property is currently 451 acres, comprised of the core 412-acre property assembled by 1949 (Figure 1), and the approximately 39-acre assemblage of parcels at the



northwest corner of the USNA that includes the United Brick Corporation parcel acquired by the USNA in 1977.

On October 16, 2018, Gray & Pape walked the length of the existing perimeter fence for the purpose of observation and recordation, and to identify the nature and locations of various segments. Gray & Pape walked the full length of the fence from the former M Street Entrance west to Bladensburg Road, north on Bladensburg Road to R Street, east on R Street to the R Street Entrance, northeast along Hickey Lane to the densely forested area northwest of the greenhouses, and the full length from the northwest corner of the USNA property on New York Avenue to the Conifer Road gate at the northeast corner of the USNA property and adjacent to the Washington Times Building. Because of the difficulty of traversing the dense vegetation, Gray & Pape did not observe the fence from Hickey Lane to New York Avenue between the residential neighborhood to the west of the USNA and the USNA. Gray & Pape only partially observed the fence along the Anacostia River side of the USNA based upon the understanding that the existing chain link fence would remain intact and no work was proposed as part of the project.

#### Documentary Research

Gray & Pape conducted research on the history and physical development of the USNA property to gain an understanding of the events and land use patterns relevant to the property boundaries, the gates, and the perimeter fence. In so doing, Gray & Pape confirmed that the USNA currently is distinguished with two historic designations, both of which have associated regulatory requirements that apply to the current project.

- The “National Arboretum” was designated as a D.C. Landmark in 1968. The boundaries of the property are not shown in the *D.C. Inventory of Historic Sites*, but the entry notes that the property is “more than 400 acres.”
- The “United States National Arboretum” was listed in the National Register of Historic Places (NRHP) in 1973. The 412-acre boundaries of the parcel as shown on the map are generally consistent with the current parcel boundaries, except for the exclusion of the former United Brick Corporation property on the south side of New York Avenue, since acquired by the USNA.

In addition to reviewing the NRHP nomination, Gray & Pape identified useful information in the following documentary sources for relevant information:



- Written and photographic historical documentation associated with the United Brick Corporation property, which is a D.C. Landmark, is listed in the NRHP, and was recorded by the Historic American Engineering Record (HABS) in 1983. This documentation provided information regarding the segment of the New York Avenue fencing in the area of the brickyard.
- *The Washington Post* historical database, available online through ProQuest. Articles reviewed provided information on the original establishment of the USNA and the struggle to appropriately fund and develop the property, resulting in limited public access until the 1950s.
- The History and Development of the National Arboretum, by Charles A. Goodrum, 1950, available online through the HathiTrust. Provided written and photographic information on physical improvements on the landscape immediately prior to the opening of the property to the public.
- The Historical Society of Washington, D.C. online image catalogue. Contained several photographs of the area around the USNA from the mid-20<sup>th</sup> century, showing the condition of the grounds and existing fencing prior to what is there now.
- The Library of Congress and U.S. Geological Survey online map collections. Key maps included the 1887 G.M. Hopkins Map, 1922 and 1928 aerial mosaics, and 1945, 1951, 1956, 1957, and 1965 USGS topographic maps.
- One additional useful map, the 1913 Baist real estate map, was available online on the “Bygone Brookland” blog, along with information on the property prior to the establishment of the USNA in 1927.

This research supplemented the architectural drawings obtained by STV from Kevin Tunison of the USNA that pertain to the construction and alteration of the USNA gates and perimeter fencing at various stages. These drawings provide relatively firm dates for the most significant of the gates and fencing currently extant at the USNA.

### Brief History

Research revealed that although the USNA was established by an Act of Congress in 1927, it was not until the late 1950s that the property began to resemble what it is today. The first 189 acres were acquired in 1928, followed by another 196 acres in 1934, and additional parcels in 1938 and 1949 to bring the total to 412. Although the USNA has acquired additional parcels since then, most notably, the former United Brick Corporation property on the south side of New York Avenue,



those parcels have remained outside of the cohesive 412-acre property that was planned, improved, and open to the public in the mid-20<sup>th</sup> century.

The Arboretum was first opened to the public in 1949, but multiple sources indicate that access was limited to the Spring months or by appointment, and to a 60-acre area until 1959. Most of the buildings and landscape features that characterize the property today were planned and built in the 20-year period from 1947, when preparation of the 1947-1948 master plan began, and 1967, when the New York Avenue Springhouse Road and Conifer Road gates and the extant ornamental fencing between them were completed. This includes:

- 1947 – First major permanent planting (azaleas) on the south slope of Mount Hamilton.
- 1948, 1949 – Additional property acquired.
- 1949-1958 – Construction of permanent road system.
- 1949 – Garden Club of America donates funding for plantings between Hickey Hill and the Anacostia River.
- 1952 – Dogwood area dedicated.
- 1954 – Baltimore-Washington Parkway is completed and open to traffic. New York Avenue extension, which defined the north boundary of the USNA, completed by this time.
- 1959 – USNA opens to the public year-round.
- 1960 – Entrance gates at Bladensburg Road, R Street, and New York Avenue (Conifer Road) constructed (Figure 2).
- 1962 – Five greenhouses completed on Hickey Lane.
- 1964 – Administration & Research Building dedicated. M Street entrance gate complete by this time.
- 1967 – New York Avenue Springhouse Road entrance gate completed. Construction of first segment of fence hereafter described as “Type A” completed.



### Fence Type A

Research revealed that prior to the construction of the first set of entrance gates in 1960, a chain link fence enclosed the USNA property. The replacement of chain link fence with a more permanent, aesthetically pleasing fence consistent with the use of the property was planned by 1967 and possibly as early as 1960.

Drawings from 1967 in the collection of the USNA show the New York Avenue entrance gates (Springhouse Road and Conifer Road) with a new fence between them. This steel fence is shown as having diagonally-set, bullet-nosed (rounded) steel pickets and I-beam posts capped with urn finials, the latter feature with a note that "a stock modern pattern of equal size will be selected." This is consistent with the existing fence, Type A, which has a ball finial capping the posts (Figures 3 through 5).

Although the 1960 drawings for the Bladensburg Road, R Street, and New York Avenue Conifer Road entrance gates do not specifically show a freestanding Type A perimeter fence, they do show a similar fence (extant) with diagonally-set, bullet-nosed steel pickets along the top of the curved fieldstone walls flanking the gates. This suggests that the Type A perimeter fence design intentionally copied the M Street entrance gate.

By 1967 all the main entrance gates were completed, including the Bladensburg Road gate, the R Street gate, the New York Avenue Springhouse and Conifer Roads gates, and the M Street gate, and at least one segment of the Type A perimeter fence on New York Avenue.

Drawings in the collection of the USNA indicate that the extant segments of Type A fence along M Street, Bladensburg Road, and R Street were planned in 1982. The use of the same fence design is clearly an intentional effort to maintain consistency. By this time the M Street entrance gate was no longer in use, as shown in a 1979 aerial photograph of the USNA submitted to NCPC, and as reflected in the fact that the Type A perimeter fence constructed in 1982 runs south of and cuts off the M Street entrance gate.

A segment of the Type A fence was also recorded at the northwest corner of the Arboretum property, running south from New York Avenue. This area was not part of the USNA until the United Brick Corporation property was acquired in 1977, and documentary photographs of the brickyard taken in 1977 and 1983 show a chain-link fence along New York Avenue.

Despite the apparent range in construction dates, all segments of the Type A fence were observed to be the same in material, design, and method of construction.



An approximately 830-foot segment of the Type A fence on Bladensburg Road is presumed to have been removed and replaced with the existing chain link following widening and improvements to the road in 2004.

### Fence Type B

A second type of perimeter fence, hereafter referred to as “Type B” in this summary, is located along New York Avenue between the northwest corner of the USNA property and the New York Avenue Springhouse Road entrance gate. While the Type B fence is similar, it is distinguished from the Type A fence by the hollow steel posts capped by spear finials and the perpendicular-set, flat-nosed pickets (Figures 6 and 7).

This Type B segment is shown as extant on 1990 project drawings for the construction of a parking lot between the United Brick Corporation buildings and the maintenance buildings, and the reconfiguration of the adjacent New York Avenue entrance gate (Figure 2, Gate 4). The ornate sandstone pillars that now support the gate at this location were brought to the USNA from storage at Fort Totten and placed as part of this project. The pillars are believed to have been part of the perimeter fence that encircled the original Capital building designed by Charles Bullfinch.

A small section of the Type B fence between Hickey Run and the United Brick Corporation buildings has been replaced in recent years. This is likely related to improvements made by WASA to Hickey Run.

### Analysis

The NRHP nomination form for the National Arboretum does not directly address the period of significance for the property, and only enters the original date of establishment in this field of the form. The nomination form includes events related to the development of the property through the 1950s. Taking the nomination form as a point of departure, and considering additional research conducted for this study, Gray & Pape would recommend that a period of significance be considered through at least 1967 to encompass the period in which the Arboretum took on the configuration that it has today. Accordingly, all the fieldstone entrance gates from 1960-1967 would be contributing resources to the NRHP property. Because of the continuity of material, design, and construction in the Type A fence, despite the multiple periods of installation, Gray & Pape would recommend consideration of all segments as contributing resources to the NRHP property.

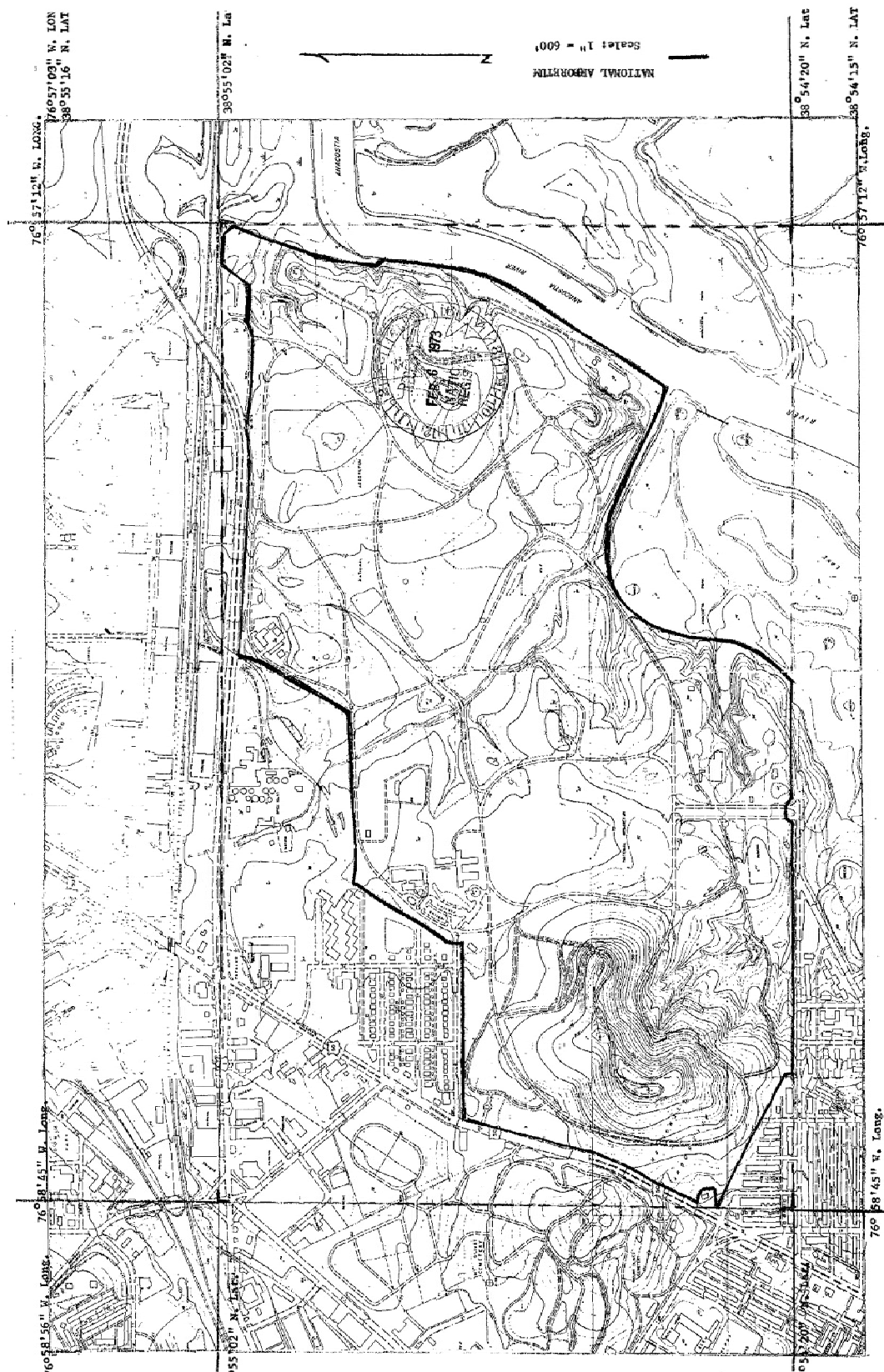


Figure 1 – USNA NRHP Boundaries (412 acres)



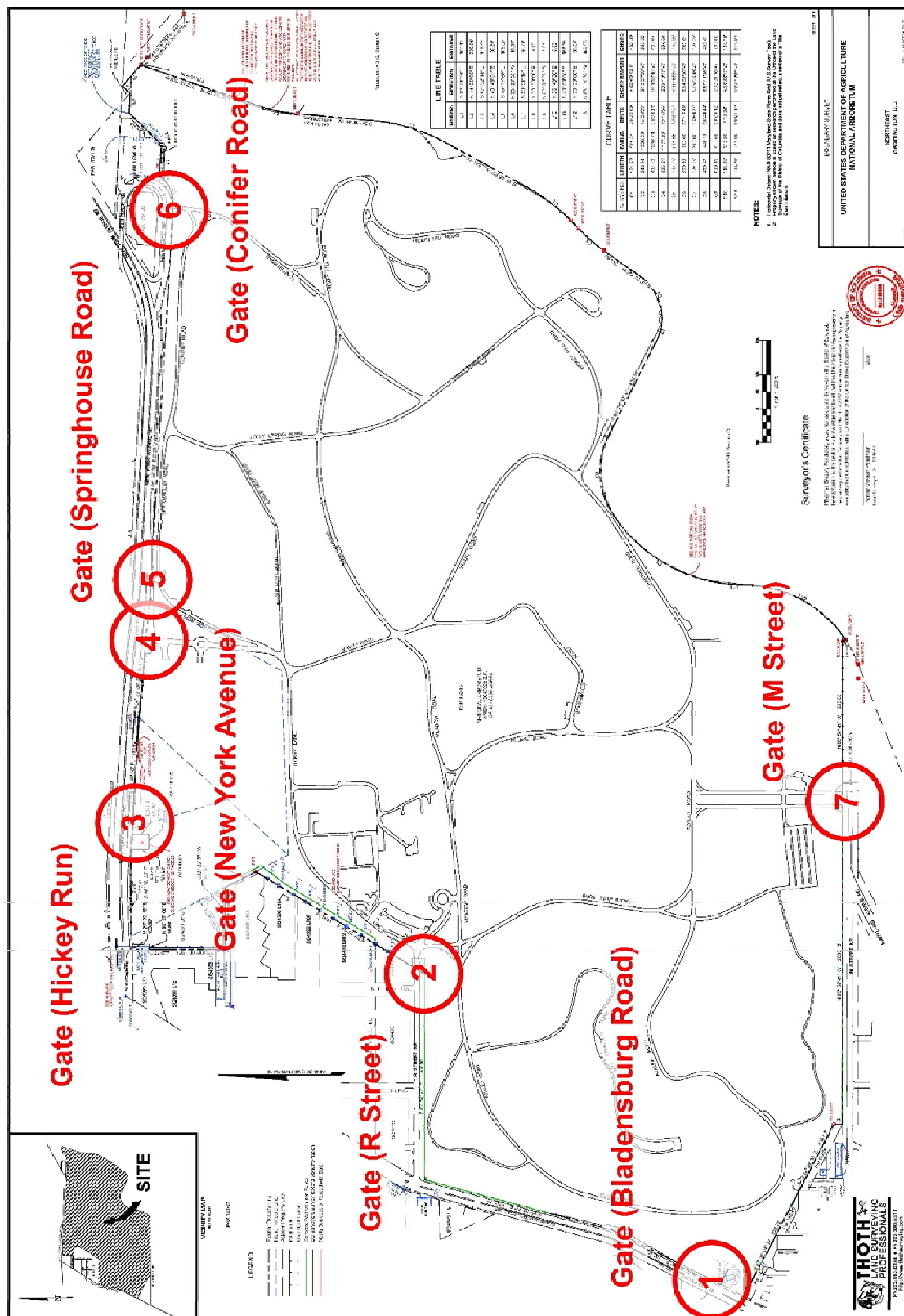




Figure 3 – Fence Type A, general view



Figure 4 – Fence Type A, showing I-beam post and ball finial





Figure 5 – Fence Type A, showing concrete foundation



Figure 6 – Fence Type B, general view



Figure 7 – Fence Type B, detail